



Seattle City Light

WHOLESALE ENERGY RISK MANAGEMENT POLICY

2023

DOCUMENT REVIEW HISTORY

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PREAMBLE

This Wholesale Energy Risk Management Policy ("WERM Policy" or "Policy") was prepared by the City Light Department's Risk Oversight Division ("ROD") to provide a comprehensive framework to manage risk surrounding wholesale energy marketing activities. This Policy has been distributed internally within the City Light Department, the Seattle City Council ("City Council"), the Mayor's Office, and with others that may be affected by its implementation.

WERM Policy requires approval by Seattle City Light's Risk Oversight Council ("ROC") and endorsement by General Manager/Chief Executive Officer ("GM/CEO"). Upon such approval, this WERM Policy would be made effective by the Director of Risk Oversight.

Raman Vishwanathan
Risk Oversight Director
Seattle City Light,
Effective Date: July 1, 2023

INTRODUCTION

The City of Seattle, by and through its City Light Department (“City Light”) operates a municipal electric utility providing electrical power to Seattle, Washington and parts of its metropolitan area, including all of Shoreline and Lake Forest Park and parts of unincorporated King County, Burien, Normandy Park, SeaTac, Renton and Tukwila. It is the 10th largest public utility in the United States and the first municipal utility in the US to own and operate a hydroelectric facility. In 2005, it became the first electric utility in the United States to fully offset all its carbon emissions and has remained carbon neutral every year since. City Light is charged with operating its power supply resources, transmission agreements, and electric system to meet the power needs of its customers.

City Light’s supply of power exceeds its retail demand on an annual basis, under all but the most extreme low water conditions. This excess power is sold in the wholesale power market, and the revenue generated is used to offset costs that would otherwise be borne by City Light’s retail ratepayers. However, City Light faces significant uncertainty regarding both the quantity of energy available to the utility (due to its reliance on hydroelectric generation) and the prices prevailing in the wholesale power market. These uncertainties result in financial risk for the utility and its ratepayers.

City Light can sell its surplus power in the “spot market” as this surplus power becomes available, or it can sell its anticipated surplus in the “forward market” for future delivery. Both practices involve risks. Waiting to sell surplus power in the spot markets exposes City Light to the possibility of selling at low prices if the wholesale market is flush with power. Selling surplus power in the forward market at a known, fixed price mitigates this risk, but exposes City Light to the possibility of having to purchase power at unfavorable prices to meet these forward commitments (as well as retail demand) in the event actual supplies turn out to be less than projected at the time the forward sale was executed.

Because of the nature of its customers’ demands and power supply portfolio, City Light will experience imbalances between the two and must therefore transact in the wholesale energy markets for energy services and products to reliably serve its customers. The elements outlined below are designed to establish the framework for City Light to manage the risks that are inherent in the wholesale energy markets in which it participates. These policies specify the procedures through which risk metrics are established and set forth, a set of rules to guide decisions concerning the sale and purchase of energy and related products. This document describes the organizational structure in place to support these marketing activities and provides a clear statement of roles and responsibilities of City Light’s divisions and personnel.

This WERM Policy governs all wholesale market activities entered into under the authority of Seattle Municipal Code Section 21.49.130 that may impact the financial risk profile of City Light. Consistent with the authority granted to City Light’s GM/CEO by the stated municipal code, the GM/CEO approves this WERM Policy and affirms the authority and responsibility of the GM/CEO and his/her designees to comply with it.

PURPOSE

City Light's energy supply portfolio consists of approximately 88% hydroelectric, 5% nuclear, 4% wind, 1% natural gas, 1% biogas. It owns and operates a total of seven hydro facilities and maintains long-term power supply contracts with the Bonneville Power Administration ("BPA").

Hydro uncertainty, coupled with wholesale energy market price volatility, leads to significant variability in City Light's net wholesale revenue from the sale of surplus energy. These uncertainties result in financial risk for the utility and its ratepayers.

The WERM Policy establishes parameters for managing risks inherent in the wholesale energy marketing and mitigating financial impact. The WERM Policy specifies the purpose, scope, and strategy including, procedures and standards necessary to ensure that City Light's financial risk exposures associated with wholesale purchase and sale activities are properly managed, and that the appropriate segregation of duties are in place.

The WERM Policy was created with the following objectives in mind:

- 1) Clearly define for all stakeholders the guiding principles, limitations, and expectations governing wholesale energy transactions;
- 2) Ensure that actions impacting wholesale energy transactions are accurately measured, approved, and relayed consistently; and
- 3) Require comprehensive analysis of all wholesale energy transactions to systematically identify, monitor, mitigate, and report associated risk exposures.

SCOPE

This WERM Policy provides the general framework and guidelines within which the various divisions in City Light are to operate. The associated Procedures Manual, referred to as the Wholesale Energy Risk Management Procedures Manual, outlines specific procedures and provides detailed guidance for these divisions adhere to. Key City Light divisions are identified in the WERM Procedures documents. Descriptions of physical transactions commonly utilized are maintained in the Procedures Manual.

The specific operating procedures and parameters for implementing this WERM Policy are detailed in the Procedures Manual to be reviewed and approved by the ROC (See "Responsibilities"). All City Light employees in relevant functional areas are expected to comply with and acknowledge their understanding of both this WERM Policy and the associated Procedures Manual as it applies to their current position.

The activities included in the WERM Policy and identified as "wholesale energy" include all energy/power, transmission capacity, ancillaries (spin/non-spin reserves, frequency response, ramping up/down, etc.), all structured transactions with various components of energy, transmission & ancillaries, weather derivatives (if any), all tradeable products with environmental attributes (e.g., RECs, carbon, or other offsets). All the above are for any term including long-term contracts.

STRATEGY

City Light's principal objective is to ensure that it meets its retail customer demand obligation while protecting ratepayer interests. To do so, City Light hedges its risk exposure by buying and selling physical energy and associated products in the wholesale energy markets. The primary objective of City Light's hedging practices is to ensure a high certainty of meeting load and obtaining the best possible value for its surplus assets while meeting reliability standards and environmental requirements.

Forward hedging strategies aim to maximize risk-adjusted expected revenues from the sale of surplus energy while meeting reliability, environmental, and recreational constraints. Wholesale energy activities should also generate additional value from City Light's generation portfolio, with due consideration of risk.

The Tolerance Limits are used to make sure any forward hedging proposal meets this tolerance limit. The ROC may update the risk metric and any associated limits with proper notification to the relevant authorities.

To safeguard its financial integrity, City Light will actively manage its credit risk by carefully selecting counterparties and determining the extent of transactions with each.

ORGANIZATIONAL STRUCTURE

The following chart describes the risk management structure of the Wholesale Energy activities at City Light.



RESPONSIBILITIES

City Light's General Manager/Chief Executive Officer (GM/CEO) ensures that ROC oversees compliance with the WERM Policy. The GM/CEO is responsible for ensuring policy compliance, including adequate internal controls, and monitoring, and making final risk management decisions. The Director of Risk Oversight's responsibilities include leading the ROC and communicating with Chief Financial Officer (CFO), setting limits on risk and credit thresholds, and suspending counterparty transactions. The Director of Risk Oversight will have a dotted-line reporting responsibility to the GM/CEO to ensure checks and balances.

Responsibilities in the Policy related to wholesale transactions are divided using the Front-Middle-Back Office model. This segregates wholesale marketing activities into Power Marketing ("Front Office"), Risk Oversight & Wholesale Settlement ("Middle Office"), and Accounting ("Back Office") functions.

Risk Oversight Council ("ROC"), a body within City Light established by this WERM Policy that reports to the GM/CEO will commission, review and approve any revisions to this policy and specific operating procedures and parameters for implementing this WERM Policy are detailed in the Procedures Manual. ROC is the primary body responsible for implementing the management and functions of this WERM Policy.

1) FRONT OFFICE

The Front Office is comprised of the Power Management Division (PMD). This cross functional office is responsible for hedging strategy and planning development, market analytics, hydrological forecasting, transaction execution, deal entry, administration of contracts relating to long-term resources, including Renewable Energy Credits and carbon products, for originating, tracking, and managing all long-term contracts throughout the transaction life cycle. Power Operations and Marketing (“POM”) is the group within the PMD that transacts in the physical wholesale energy market as needed to balance the supply of electricity energy to demand and to mitigate the risks inherent in managing the system. The PMD is led by the Director of Power Management.

2) MIDDLE OFFICE

The Risk Oversight Division (ROD) serves as the Middle Office. It provides day-to-day continuous independent risk management and oversight functions at City Light. Some of the group’s responsibilities include reviewing and valuing transactions, developing, and using quantitative tools and models for portfolio optimization and transactions evaluation, development of appropriate risk metrics, validation of all models that have the potential to impact power marketing decisions, managing credit risks, supporting wholesale settlements, wholesale deal valuation and transaction review. The Director of the ROD reports directly to the CFO, and to the GM/CEO on a regular basis.

3) BACK OFFICE

The Back Office is comprised of a section of the Accounting Division. It is responsible for liaising with City treasury, transaction billings/ invoicing, receipts, and payments administration.

4) GENERAL MANAGER / CHIEF EXECUTIVE OFFICER (“GM/CEO”)

Concerning wholesale energy risk management efforts, the GM is responsible for the following:

- a) Ensuring compliance with this WERM Policy;
- b) Ensuring adequate internal controls exist to safeguard City Light’s financial integrity and its retail customers with respect to wholesale energy purchases and sales activities;
- c) Maintaining an organizational structure that ensures that all wholesale energy activities are monitored by City Light staff not directly involved in executing the transaction;
- d) Resolving ROC vacancies in the best interests of the Utility while preserving the segregation of duties necessary for adequate oversight;
- e) Making final decisions on risk management issues; and
- f) Reviewing and endorsing the recommendations to the City Council as presented by the ROC.

5) ROLE OF RISK OVERSIGHT DIRECTOR

Regarding wholesale energy risk management efforts, the Risk Oversight Director is responsible for the following:

- a) Serve as the Chair of the ROC and lead meetings;
- b) Brief the GM on City Light's risk exposure and ROC actions on a regular basis and as-needed;
- c) Ensure that portfolio risks are computed at prescribed frequency, and that they are communicated to all relevant stakeholders in a timely manner to facilitate business decisions;
- d) Ensure development of appropriate risk control and reporting protocols and any exceedances are communicated to ROC;
- e) Along with the PMD, review, revise and approve the WERM Procedures when applicable;
- f) Recommend to CFO, for approval, counterparty credit limit threshold defined as the maximum secured and unsecured credit limit that may be extended to any individual counterparty;
- g) Recommend to CFO and to ROC the methodology used to establish appropriate credit for counterparties; and
- h) Suspend transacting with a counterparty at any time due to concerns about the counterparty's credit-worthiness or ability to fulfill the terms of a proposed or pending transaction and inform CFO and ROC.

6) ROLE OF RISK OVERSIGHT COUNCIL ("ROC")

The ROC is the primary body within City Light with the authority and responsibility for implementing the wholesale energy risk management and oversight function of this Policy and leading City Light's energy risk management efforts on a path of continuous improvement.

The ROC shall be comprised of four voting members and four non-voting members. Director of Risk Oversight (*Chair*), Chief Financial Officer (CFO) (Acting Chair), Regulation & Market Development Officer, Energy Innovation & Resources Officer, shall each have a single vote on matters that are put forward at ROC for a decision. The three non-voting members are Director of Power Management, the Manager of Power Marketing, and Risk Oversight Strategic Advisor.

The ROC shall meet no less than twice per calendar month. Attendance at ROC meetings shall be mandatory for appointed members. For a ROC meeting to be held, there needs to be at least four members in attendance, of which three will need to be voting members or their designees but limited to no more than two voting designees.

Member attendance shall be recorded in the ROC meeting minutes. Any member of the ROC can request an emergency meeting of the ROC to address circumstances or issues that may require immediate attention.

At least three voting members, or their designees, must participate in the ROC meeting to

vote and approve a proposed action. In the event a voting member is unable to attend a ROC meeting in person or by telephone, the member may designate an alternate to attend and vote in their absence, including one of the non-voting members. The Chair of ROC has the authority to reject a designee in issues that he/she deems appropriate. If any two of the voting members, or their designees, are not present at a ROC meeting, a vote on a proposed action cannot take place. The ROC will make decisions and take actions by a simple majority vote. If the ROC reaches an impasse that cannot be addressed through a vote, the Chair will refer the issue to the GM/CEO by the end of the next business day for resolution.

In cases where a member of the ROC leaves the employment of City Light, the Chair of ROC or the GM/CEO will resolve the ROC vacancy by making an interim appointment at his/her discretion.

The Director of Risk Oversight will act as secretary to the ROC or will delegate such responsibilities and will document all meetings and actions taken by the ROC in meeting minutes that will be distributed to ROC members for their review and acceptance. The Chief Financial Officer will officiate as the acting-chair in the absence of the Chair. Notes/Minutes approved by the ROC will be distributed by the Director of Risk Oversight to the GM/CEO, ROC members, and when requested, to the Mayor, and the City Council central staff.

The specific responsibilities of the ROC are as follows:

- a) Review and approve wholesale transactions as outlined in the Procedures Manual which supports this Policy;
- b) Commission and review the Procedures Manual associated with this Policy and changes to it;
- c) Review and approve transactions outlined in the Procedures Manual, including the Hedging Strategies, be implemented by the PMD;
- d) Approve, upon the recommendation of the ROC chair, the methodology used to establish counterparty credit limits;
- e) Monitor and assess compliance with this Policy and associated procedures;
- f) Discuss and pre-approve risk metrics and limit exceptions, when appropriate;
- g) Discuss and resolve Policy and Procedures violations or exceptions and taking corrective action to minimize related losses or increased risks as appropriate;
- h) Review this Policy annually and inform the GM/CEO of any changes by July 1st;
- i) Discuss elements of wholesale energy risk management best practices and develop a City Light opinion of their specific practicality;
- j) Conduct other activities relevant to the implementation and oversight of this Policy and related procedures;
- k) Provide a timely summary of ROC accomplishments for the past year and setting of goals for the upcoming year to the GM/CEO by end of Q1;
- l) Ensure the continual improvement in City Light's risk management, risk analytics and oversight functions; and
- m) Review and approve expected, recurring, and material changes to all modeling inputs used by the ROC to ensure that market, operational and credit risks are accurately quantified;

CHANGES TO POLICY

Any changes to this WERM Policy must be approved by ROC and endorsed by the GM/CEO and the GM may evaluate, modify, approve or reject any and all changes to the WERM Policy.

EXCEPTIONS

Occasionally, opportunities may present themselves for engaging in wholesale energy activities that weren't initially considered during the drafting of the WERM Policy. Provided that these new activities do not conflict with the provisions of the WERM Policy, a request for approval must be submitted to the ROC, addressing the following elements:

- a) All risks associated are identified and understood;
- b) The economics of the activity can be valued according to a methodology that can be documented, is repeatable and is statistically valid;
- c) Contract terms are unambiguous and have been reviewed and approved by the City's Attorney's Office;
- d) Support staff involved have received adequate training and demonstrate familiarity with the product; and
- e) Customer impact, accounting, and regulatory issues (if any) associated with the product have been identified and addressed.

CONFIDENTIALITY

The WERM Policy is intended as a document that can be distributed to the public. The associated Procedures however contain proprietary information are treated with greater scrutiny, subject to applicable laws. Distributing the Procedures Manual should have the explicit approval of the ROC and the endorsement of the General Manager.

PRINCIPLES

The principles supporting this WERM Policy are as follows:

- a) **Monitor and Communicate:** Successful management of the price and volumetric risks faced by City Light requires analysis, monitoring, and communication;
- b) **Procedures Manual:** City Light GM/CEO will delegate to the ROC for its Chair to endorse risk management Procedures Manual for wholesale energy activities that reflects a standardized approach to the identification, analysis, evaluation, treatment, communication and monitoring of risks. Prior to the endorsement by Chair of ROC, the Procedures Manual with details of transactions, limits, evaluation methods, limits, procedures and exceptions should be clearly defined, and approved by the - the Director of Risk Oversight and Director of Power Management;

- c) **External Review.** From time to time, but not to exceed five years, City Light will commission a qualified outside consultant to perform and report on the evaluation of wholesale energy risk management activities;
- d) **Internal Review:** On a yearly basis and to coincide with the accounting audit schedule, City Light will conduct an internal audit of the wholesale energy activities to ensure that these activities are in line with this Policy;
- e) **Address Customer's Demands.** City Light will meet demand at the highest level of certainty and will not engage in speculative transactions;
- f) **Transact Within Limits.** City Light will - transact within established limits, and transactions will be verified and recorded, exceptions can be made with appropriate approvals;
- g) **Physical Transactions.** All activities will be tied to physical resources.
- h) **Measure Risk Exposure.** Statistical models will be utilized to produce a metric to protect the utility against the worst outcomes;
- i) **Minimize Negative Outcomes.** City Light will minimize negative cash flow consequences deriving from activities included in this WERM Policy;
- j) **Avoid Negative Results (i.e. Surprises).** City Light will inform City Council on the performance of the activities related to wholesale energy on an ongoing basis to avoid surprises that may negatively impact the financial position of the utility;
- k) **Capable Staff.** City Light will hire, train and retain competent staff to design, implement, review and report on the performance of the wholesale energy activities;
- l) **Adequate Infrastructure.** City Light will procure, maintain and update adequate infrastructure to measure, report and communicate wholesale energy activities;
- m) **Separation of Duties.** City Light's GM/CEO will ensure clear segregation of duties, reporting lines, and impartiality between functions and personnel who originate transactions and manage risk, and those who analyze, monitor and report risk.
- n) **Senior Management Oversight.** A group made up of senior City Light managers will oversee the wholesale energy activities. This group will constitute itself as the Risk Oversight Council;
- o) **Explicit Compliance with Policy and Procedures.** All employees and chain of command related to the Wholesale Energy activities will be intimately familiar with the WERM Policy and the Procedures Manual;
- p) **Term of Wholesale Energy Activities.** Except for long-term contracts, the Wholesale Energy Trading activities will not exceed a term of 60 months;
- q) **Driven by an Optimal Hedge Model and Metric.** An optimal hedge position will be calculated every two weeks for the current year and monthly for the following year. City Light will ensure its position remains within the Risk Limit, aligned with the expected optimal portfolio, as defined by the Wholesale Revenue at Risk (WRaR),

calculated at a high confidence level. Any exceptions will be handled according to the procedures approved by the ROC;

- r) **Maximize Value of Wholesale Energy.** The wholesale energy activities will be guided by a methodology that optimizes the expected wholesale revenue;
- s) **Establish Limits for Wholesale Energy Activities.** Wholesale energy activities will be limited by a dollar limit reflective of the maximum risk City Light will tolerate for the deviation from the expected optimal portfolio; This dollar limit will be term-dependent, and the annual dollar limit will be allocated into each month;
- t) **Establish and Review Limits Yearly for the Term.** ROC will calculate and recommend to the GM/CEO a dollar limit for the different terms under consideration. As part of the on-going Hedging Strategy updates, the ROC will revisit and review the established limits as market condition changes;
- u) **Record Keeping.** All wholesale energy transactions will be recorded in the official system of record daily, and periodic risk and policy compliance reports will be delivered to the ROC, GM/CEO, Mayor and the City Council's central staff; and
- v) **Reporting.** Reporting will include policy compliance, violations or exceptions, resources and expected load, and forward positions. Models and inputs for valuation and risk measurement shall be subjected to a regular validation and a change control process, which are detailed in the Procedures Manual.

ACKNOWLEDGEMENT

Name	Title	Sign & Date
Mike Haynes	Interim General Manager/CEO	
Kirsty Grainger	Chief Financial Officer	
Raman Vishwanathan	Director, Risk Oversight	
Siobhan Doherty	Director, Power Management	
Nhung Mach	Strategic Advisor, Risk Oversight	
Drew Grissom	Senior Manager, Power Operations and Marketing	

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